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ABSTRACT

This booklet describes the population of youth in chemical dependency treatment programs. The Minnesota Student Survey was administered to 500 voluntary adolescent participants in inpatient and outpatient chemical dependency treatment programs in 1995 and 1996. These youth were matched with adolescents selected randomly from the public school student population. This analysis provides a comparison between youth in treatment programs and youth in public schools. Survey administration, matching process, and criteria for admission to chemical dependency treatment are reviewed. A description of the youth, their families, and their environments includes information about family composition and relationships, family alcohol and drug problems, family violence, sexual abuse, date violence and rape, and multiple victimizations. Levels of psychological distress are described; the picture includes low self-esteem, emotional distress, suicidal behavior, and self-injury. Insights into sexual activity levels, school perceptions, and behaviors are presented. Antisocial and illegal behaviors, including delinquent behavior, recent trends in substance use, cigarette use, alcohol and drug use prevalence, high-risk substance use, and consequences of substance use are discussed. The findings are summarized, and recommendations are presented. (Contains 32 references.) (EMK)

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1995/1996 Minnesota Student Survey

Chemical Dependency Treatment Programs

Minnesota Department of Human Services

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Chemical Dependency Treatment Programs

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Participating Sites*

Addiction Recovery Technologies, Mankato
Anthony Lewis Center, Blaine and Eagan
BASICS, Minneapolis
Brainerd Regional Human Services Center
Break Free Adolescent Program, Brainerd
CLUES, Minneapolis
Cardinal Recovery Center, Willmar
Cardinal's Prairie Youth Program, Willmar
Cedar Ridge, Stillwater
Charter Behavioral Health System of Waverly and of West St. Paul
Dellwood Recovery Center, Cambridge
District Memorial Hospital, Forest Lake
Douglas County Hospital, Alexandria
Eden Youth Program, Minneapolis
Fairview Behavioral Services, Crystal, Maplewood, Minneapolis, and Woodbury
Fairview Boys Totem Town, Saint Paul
Faribault Family Focus
Fergus Falls Regional Treatment Center
Fountain Lake Treatment Center, Albert Lea
Free Spirit, Inc., Lakefield
Glenmore Recovery, Crookston, Roseau, and Thief River Falls
Hazelden Center for Youth & Families, Plymouth
HealthEast Adolescent Behavioral Health Services, Saint Paul
Hutchinson Community Hospital
Institute on Black Chemical Abuse, Saint Paul
Lakeland Mental Health Center, Fergus Falls
Lakes Counseling Center, Detroit Lakes

*Data from all participating sites may not be included in this report because this profile includes only adolescents age 14 to 17.

Acknowledgments

Lakes Region Chemical Dependency Program, Bemidji
Mash-Ka-Wisen Treatment Center, Sawyer
Mayo Clinic, Rochester
Meadow Creek, Pine City
Miller Dwan Medical Center, Duluth
Moose Lake Regional Treatment Center, Cloquet
New Life Treatment Center, Woodstock
Northland Recovery Center, Grand Rapids
Northwest Recovery Center, Thief River Falls
Omegon, Inc., Minnetonka
Project Turnabout, Granite Falls, Marshall, and Redwood Falls
Ramsey/New Connection Programs, Blaine, Eden Prairie, and Saint Paul
Range Treatment Center, Hibbing
Red Lake Alcohol Rehabilitation Program
Red Lake Group Home, Redby
Saint Cloud Hospital
Saint John's Regional Health Center, Red Wing
Saint Joseph's Medical Center, Brainerd
Saint Peter Regional Treatment Center
Sioux Valley Hospital, New Ulm
Southwestern Mental Health Center, Worthington
Stevens Community Memorial Hospital, Morris
The Adolescent Treatment Centers of Fairmont and of Winnebago
Twin Town Treatment Center, Saint Paul
United Behavioral Systems, Minneapolis
Upper Mississippi Mental Health Center, Bemidji
White Earth Treatment Program
Woodland Centers, Willmar

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Executive summary

This report highlights some of the findings that emerged when the Minnesota Student Survey was administered to 500 voluntary adolescent participants in chemical dependency treatment programs in 1995 and 1996. In order to get an accurate comparison with other youth, these adolescents were matched with adolescents of the same gender and age randomly selected from the public school student population who had completed the same survey 6 to 9 months earlier.

Males outnumbered females in chemical dependency treatment. American Indian youth were the only racial/ethnic group overrepresented in treatment. Adolescents in chemical dependency treatment were almost twice as likely as other youth to come from single-parent households.

Rates of family substance abuse were almost 3 times higher for adolescents in chemical dependency treatment than for adolescents in public schools. Adolescents in chemical dependency treatment were almost twice as likely as public school students to have been physically abused at home and to have witnessed the physical abuse of other family members. Sexual abuse by persons outside the family was about twice as common among both females and males in chemical dependency treatment as among their student counterparts. Date rape and other date violence was also reported much more often by females in treatment.

Adolescents in chemical dependency treatment had lower self-esteem and higher levels of emotional distress than public school students. Their rate of attempted suicide was about twice as high as that for public school students. In fact, half of the females and one-fifth of the males in chemical dependency treatment said that they had tried to kill themselves at some point in their lives.

Rates of sexual activity were also very high among the adolescent chemical dependency treatment population with almost 9 out of 10 reporting that they had had sexual intercourse. The adolescents in chemical dependency treatment also initiated sexual activity at a younger age than their counterparts in public schools, and they were less likely to protect themselves from pregnancy and sexually transmitted diseases. Females in chemical dependency treatment had been pregnant at a rate 3 times higher than that reported by females in public schools. Similarly, males in chemical dependency treatment were 3 times more likely than males in public schools to report that they had gotten a sexual partner pregnant.

Antisocial behaviors were much more common among adolescents in chemical dependency treatment than public school students, including physical assaults, shoplifting, and vandalism. These adolescents were also much more likely than public school students to acknowledge gang involvement and to carry weapons when they attended school.

Not surprisingly, use of a variety of substances was extremely common among the chemical dependency treatment population. Adolescents in chemical dependency treatment were 7 times more likely than public school students to smoke at least a pack of cigarettes a day. They were 3 times more likely to use inhalants and opiates, 4 times more likely to use marijuana, 4½ times more likely to use amphetamines and others' prescription drugs, 5 times more likely to use sedatives, and about 8 times more likely to use LSD or other hallucinogens and cocaine. Three-fourths of the adolescents in chemical dependency treatment had used alcohol or drugs before or during school. The use of multiple drugs also distinguished the chemical dependency treatment population from the student population. Ado-

lescents in chemical dependency treatment were 11 times more likely than public school students to use at least 3 drugs. Serious consequences of substance use were reported by a large majority of adolescents in chemical dependency treatment. For adolescents in chemical dependency treatment, the average number of consequences of their substance use was 9 compared with an average of 2 for public school students who had used substances in the past year.

These results have implications for how assessment and treatment is provided. Troubled adolescents have a history of physical or sexual abuse, substance abuse, emotional distress, high-risk sexual behavior, illegal activity, suicide attempts, or problems in school. By the time they are identified as needing treatment for substance abuse, many of them have experienced several of these problems.

An adolescent may come to the attention of school authorities, or health care, social services or juvenile justice systems as a result of substance use or other high-risk behavior. Regardless of the impetus for evaluation, an assessment should be comprehensive and conducted by professionals trained to discern the presence of psychiatric disorders and substance use disorders as well as physical abuse, sexual abuse, other family dysfunction, or environmental risk. This type of thorough assessment needs to be available for all families without limits imposed by financial resources.

Early intervention services need to be enhanced to respond to emerging alcohol and drug problems among adolescents who do not exhibit consequences that are serious enough to meet criteria for admission to chemical dependency treatment. Timely and appropriate interventions may preclude the need for treatment for many adolescents.

The survey results also have implications for the provision of substance abuse treatment. Specific recommendations are:

- Chemical dependency treatment should address tobacco as an addictive, mood-altering drug.

- Therapeutic services should be flexible to respond to diverse and complex individual and family needs. Toward this end, treatment programs should have staff or arrangements with community resources with expertise in mental health, services for abuse victims, and family therapy.

- Family involvement in adolescent treatment should be expected. Treatment programs should be prepared to assist parents in learning parenting and behavior management skills. When problems among family members may interfere with an adolescent's recovery, family members should be given assistance in finding individual help as well.

- In discharge planning the treatment program should consider the level of family functioning and the adolescent's ability to cope with the environment. The adolescent's safety and well-being must be a primary consideration.

- The responsibility of the treatment program should not be considered met until the adolescent has developed sufficient appropriate coping mechanisms to address each of the problem areas identified in the assessment or the adolescent is connected with a more appropriate resource.

Admissions to chemical dependency treatment

Based on data collected by the Minnesota Department of Human Services, 3,667 adolescents (under age 18) were admitted to chemical dependency treatment in the state in 1995, the last year for which complete data are available. Licensed treatment in Minnesota includes outpatient programs, inpatient or residential programs, extended care residential programs, and halfway houses. The number of annual treatment admissions is higher than the number of individuals who received treatment since a transfer from one setting to another is counted as two separate admissions and sometimes individuals are admitted to treatment more than once in the same year.

Treatment lengths of stay vary greatly. Outpatient programs typically range from 4 to 12 weeks. The typical length of stay for adolescents who complete inpatient programs is 3 to 4 weeks. Extended care and halfway house programs are much longer, lasting about 3 to 4 months.

Survey administration

The Minnesota Student Survey was designed to elicit important information about adolescents from adolescents themselves. The survey included a variety of questions about their backgrounds, families, and schools, as well as about their feelings and behaviors. The Minnesota Student Survey was administered to public school students in 1989, 1992, and 1995. In 1991, it was administered to adolescents in alternative schools and area learning centers, residential groups homes, and correctional facilities; it was administered a second time to adolescents in these special settings in 1995. Adolescents in chemical dependency treatment programs participated in the survey for the first time in 1995. A second administration of the survey in chemical dependency treatment programs was conducted early in 1996 to increase the survey sample size.

The chemical dependency treatment survey sample was limited to primary outpatient and inpatient treatment programs. Adolescents in extended care and halfway house programs were not included because they may have had several months of abstinence from alcohol and drugs, distorting the survey results. The survey sample for this report was also limited to adolescents age 14 to 17. Survey respondents age 18 and over were excluded because they are adults. The small number of adolescents under age 14 who completed the survey were excluded because all their responses could not be compared with public school students of the same age. Students under age 14 in public schools completed a much shorter version of the student survey which omitted many of the items discussed in this report such as substance use consequences and sexual behavior.

During the 1996 administration of the survey, participating treatment sites were asked to record how many adolescents did not consent to complete the survey. (This information was not recorded during the 1995 survey of treatment sites.) Of the adolescents invited to participate, 6% refused and 4% could not participate because of conflicting activities. Of the 536 surveys completed by the target age group, 500 (93%) were used for analyses in this report. The remainder were excluded because of inconsistent responses or denial of all substance use.

Matching adolescents in chemical dependency treatment with public school students

This report compares the 1995 and 1996 survey responses of adolescents in chemical dependency treatment with adolescents in public schools. Each adolescent in the chemical dependency treatment survey sample was randomly matched by age and gender with a public school student from the 1995 student survey population. This matching procedure ensures that differences found between the two groups are not the result of age or gender differences.

One difference between the two adolescents survey groups remains, however. The chemical dependency treatment adolescents took the survey 6 to 9 months later than the public school students. Therefore, it is possible that some differences between the two groups might result from the time difference. For example, since drug use increased among students in Minnesota between 1992 and 1995,[1] a higher rate of drug use among adolescents in chemical dependency treatment could simply be the difference between two different points in time. However, the differences between the two groups were much too large to be attributed to the time that elapsed between survey administrations.

Comparing the chemical dependency treatment survey sample with treatment admission figures for 14- to 17-year-olds reveals that the survey sample is generally representative of the treatment population as a whole. Males comprised 63% of the survey sample and 66% of the treatment admissions. The proportion of adolescents of color was the same for the survey sample and the treatment population. The survey sample had a slightly smaller proportion of African American youth and a slightly higher proportion of biracial or multiracial youth than the treatment population, however. This difference may be a result of differences in response options on the survey and the treatment data collection forms. The survey allows the adolescent to check all race/ethnicity categories that apply whereas the treatment forms require that the adolescent either check one particular race or the category "mixed race."

This report compares adolescents in chemical dependency treatment with adolescents in public schools. Even though adolescents in treatment may also be students, the term "students" in this report refers exclusively to the adolescents who completed the survey in school. For the sake of brevity, the chemical dependency treatment program sample will be shortened to "CD treatment" in tables and graphs. Percentages will be rounded to whole numbers; rounding percentages occasionally results in a total of 99% or 101% instead of 100% on tables or pie charts.

Population description

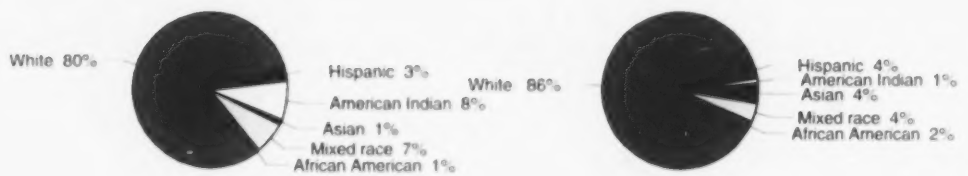
Adolescent males outnumbered females in adolescent chemical dependency treatment. Females were younger than their male counterparts, however, with 44% of the females younger than age 16 compared with 26% of the males.

The chemical dependency treatment survey sample included more adolescents of color than the public school sample. The only racial/ethnic group greatly overrepresented in treatment was American Indians which comprised 8% of the treatment sample but only 1% of the student sample. In contrast, Asian American youth were underrepresented in treatment (1% versus 4% of the student sample).

Demographics of the chemical dependency treatment survey population

	Number	%
Sex		
Females	187	37
Males	313	63
Age		
14	36	7
15	129	26
16	163	33
17	172	34

Racial/ethnic background



CD treatment

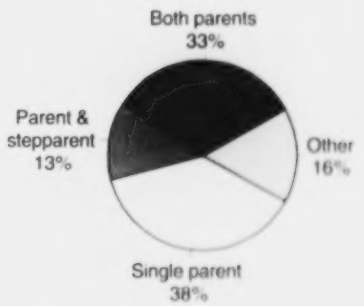
Public schools

Family composition/relationships

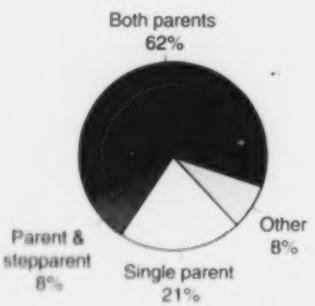
Adolescents in chemical dependency treatment were much less likely to come from two-parent homes than adolescents in the public school population. In fact, the students were almost twice as likely as the treatment adolescents to be living with both biological or adoptive parents. More adolescents in chemical dependency treatment than students had parents who were never married, or who were separated or divorced. Adolescents in chemical dependency treatment were much more likely than students to live with single parents, other relatives, or in other situations.

Despite differences in family composition, adolescents in chemical dependency treatment were almost as likely as students to believe that their parents cared "quite a bit" or "very much" about them; a very large proportion of both groups felt this way. About two-thirds of both groups of adolescents believed that their family cared about their feelings, with the percentage, again, slightly higher for the students. Differences were much greater for several other family-related questions, however, with adolescents in treatment much less likely than students to give positive responses to the questions about whether their family respected their privacy, understood them, or had fun together.

Living situation



CD treatment



Public schools

Perception of family

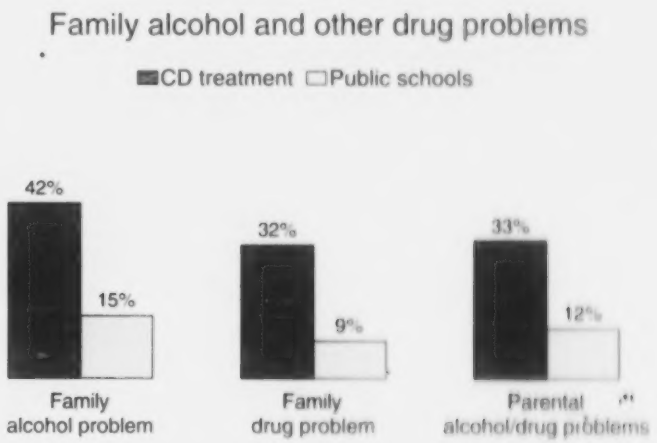
How much do you feel... *(Quite a bit or very much)*	Chemical dependency treatment %	Public schools %
Your parents care about you?	82	86
Your family cares about your feelings?	62	67
Your family respects your privacy?	39	48
Your family understands you?	33	44
Your family has lots of fun together?	23	41

Adolescents in treatment were less likely than students to say that they could talk with their father or mother about their problems "most of the time," even when the parents were living in the home or otherwise available. However, the differences were not large (for fathers, 21% of adolescents in treatment versus 26% for students; and for mothers, 31% of adolescents in treatment versus 39% for students). Adolescents in treatment were also somewhat less likely than students to believe that their parents' rules were very fair and reasonable (30% versus 38%). However, the two groups of adolescents were very similar in their perceptions of whether their parents followed through with consequences when they broke the rules.

Family alcohol/drug problems

Adolescents in chemical dependency treatment were approximately 3 times more likely than public school students to report alcohol and drug problems in their families. They were asked, "Has alcohol use by any family member repeatedly caused family, health, job, or legal problems?" followed by a similar question for drug use. When the responses for alcohol and drug problems were combined, but limited to adolescent assessment of their parents, the difference was also notable: adolescents in chemical dependency treatment were almost 3 times more likely than students to report that a parent had an alcohol or drug problem.

In the chemical dependency treatment population, parental substance abuse was associated with physical and sexual abuse within the family, but it was not strongly related to adolescent substance abuse.

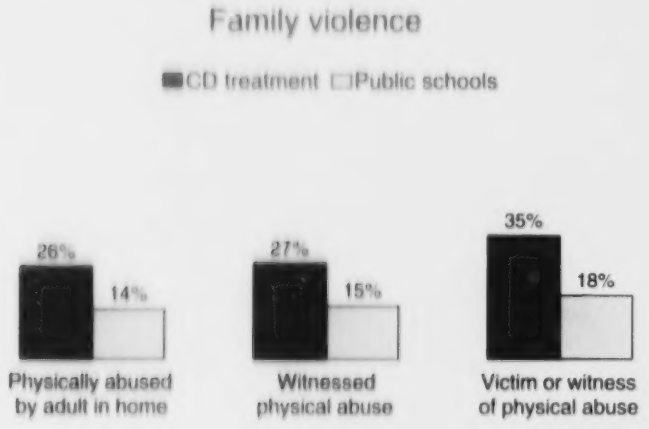


Family violence

The survey included two questions about family violence: "Has any adult in your household ever hit you so hard or so often that you had marks or were afraid of that person?" and "Has anyone in your family ever hit anyone else in the family so hard or so often that they had marks or were afraid of that person?" A yes response to the first question was considered physical abuse and a yes response to the second question was considered witnessing physical abuse.

Adolescents in chemical dependency treatment were almost twice as likely as public school students to have been physically abused in the home, and to have witnessed other family members being physically abused. Considering both aspects of family violence means that one-third of adolescents in chemical dependency treatment have been physically abused, witnessed such abuse, or both.

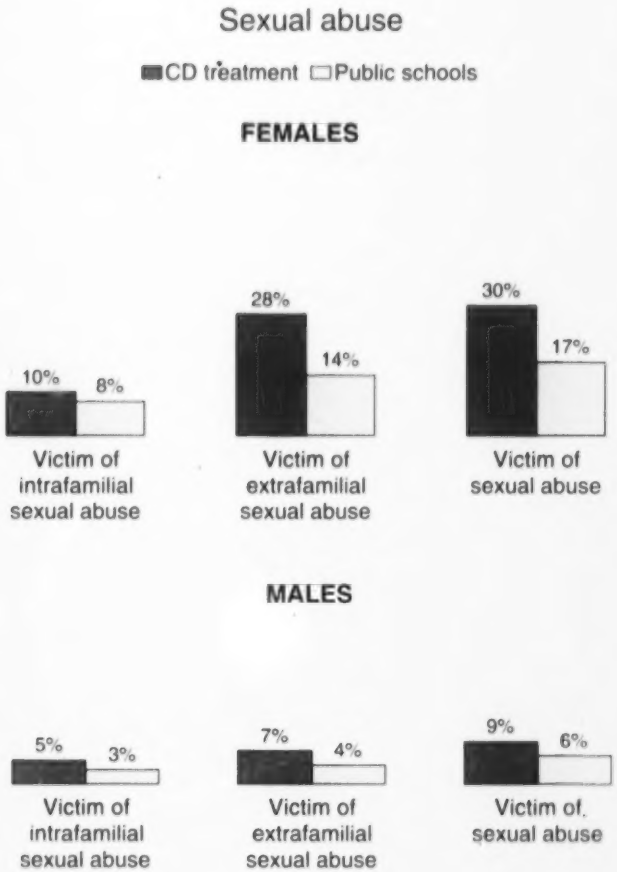
Family violence was associated with severe emotional health and self-esteem problems as well as an increased likelihood of sexual abuse by an adult non-family member or a date among adolescents in chemical dependency treatment. Family violence was also associated with higher rates of suicide attempts and sexual activity among adolescents in this population.



Sexual abuse

Adolescents in chemical dependency treatment were more likely than public school students to report histories of sexual abuse. The survey asked, "Has any older or stronger member of your family ever touched you sexually or had you touch them sexually?" and "Has any adult or older person outside the family ever touched you sexually against your wishes or forced you to touch them sexually?" Considering both types of sexual abuse reveals that twice as many females in chemical dependency treatment had experienced sexual abuse as females in the public school population. For males in treatment, the sexual abuse rate was 1½ times higher than the rate among male students.

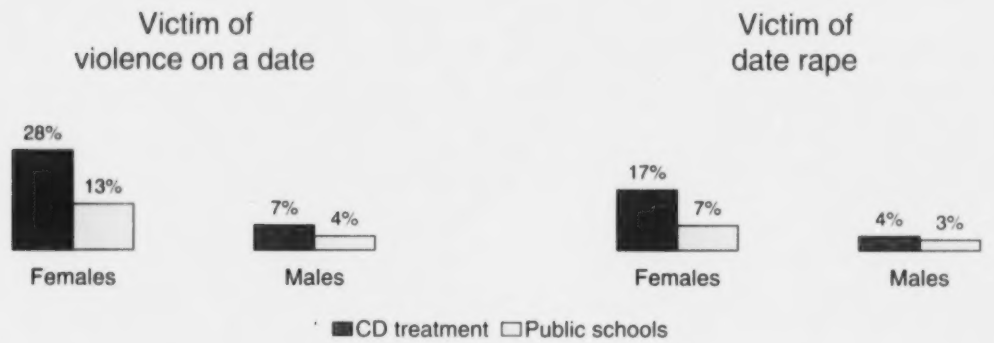
A history of sexual abuse was associated with suicide attempts, self-esteem and emotional health problems, and an increased risk for date rape and date violence among adolescents in the chemical dependency treatment population.



Date violence and rape

Survey questions also asked about date violence and date rape (which are not included in the definitions of physical and sexual abuse used in this report). The survey asked, "Have you ever been the victim of violence on a date?" and "Have you ever been the victim of date rape?" Females in chemical dependency treatment were much more likely than females in public schools to report date violence (2 times higher) and date rape (2½ times higher). Males in chemical dependency treatment were 1½ times more likely than males in public schools to report being a victim of date violence. Being a victim of date rape was reported by an almost equally low percentage of both male populations, however.

Both date violence and rape were reported much more frequently by females than males in chemical dependency treatment. Many individuals who reported date violence also reported date rape. Date violence and rape were often associated with severe emotional health and self-esteem problems as well as suicide attempts in the adolescent treatment sample.



Multiple victimizations

To examine differences in multiple experiences of abuse, five measures of victimization were considered: intrafamilial sexual abuse, extrafamilial sexual abuse, intrafamilial physical abuse, date violence, and date rape. The proportions that reported two or more of these experiences included 17% of the chemical dependency treatment adolescents compared with only 9% of the public school students.

Differences between the two survey populations were even more apparent when the threshold was three victimization experiences and genders were examined separately. This high level of victimization was reported by 17% of females in chemical dependency treatment compared with 7% of female students, and 4% of males in chemical dependency treatment compared with 2% of male students.

Further analyses showed that a history of physical abuse within the home was associated with a higher risk of date violence and date rape for both females and males. A history of sexual abuse within or outside the home also was associated with a higher risk of date violence and date rape. These findings indicate that childhood abuse greatly increases the vulnerability of adolescents to repeated victimization.

Adolescents in chemical dependency treatment who were victims of multiple abusive experiences were very vulnerable to a host of other problems. These individuals were more likely than nonvictims to have severe self-esteem and emotional health problems, to have attempted suicide, and to be multiple drug users. Victims of multiple abusive experiences were more likely than nonvictims to report that one or both parents abused alcohol or drugs, and they were less likely to believe their family cared about them.

Victimization experiences

CD treatment

Public schools

Low self-esteem

For most measures of low self-esteem, differences between adolescents in chemical dependency treatment and adolescents in public schools were notable. Adolescents in chemical dependency treatment were less likely to be satisfied with themselves and to feel good about themselves. They were more likely to believe that they do not have much to be proud of and to feel that their lives are not very useful.

Adolescents in chemical dependency treatment with low self-esteem were very likely to have been victims of physical and sexual abuse and to have attempted suicide. They also were more likely than adolescents in chemical dependency treatment with higher self-esteem to report date rape and date violence, and to feel that their family does not care about them. Not surprisingly, these individuals tended to report emotional health problems as well.

Low self-esteem	CD treatment %	Public schools %
I am able to do things as well as most other people (Disagree)	13	10
I usually feel good about myself (Disagree)	23	15
On the whole, I'm satisfied with myself (Disagree)	23	16
I feel like I can't do anything right (Agree)	24	22
I feel I do not have much to be proud of (Agree)	32	24
I feel that my life is not very useful (Agree)	29	17
Sometimes I think that I am no good (Agree)	37	34

Emotional distress

The survey asked a variety of questions about mood states for the previous 30-day period. Adolescents in chemical dependency treatment were more likely than their counterparts in public schools to report pervasive feelings of sadness, bad moods, anxiety, stress, and dissatisfaction with their personal lives. The greatest difference was seen for feelings of discouragement or hopelessness with many more adolescents in chemical dependency treatment feeling this way.

Adolescents in chemical dependency treatment with severe emotional health problems were more likely to have been sexually abused, physically abused, raped by a date, or victimized by date violence than individuals without emotional health problems. They also were less likely than adolescents in chemical dependency treatment who did not have emotional problems to believe their family cared about them, and more likely to suffer low self-esteem, use at least 3 drugs, and to have attempted suicide.

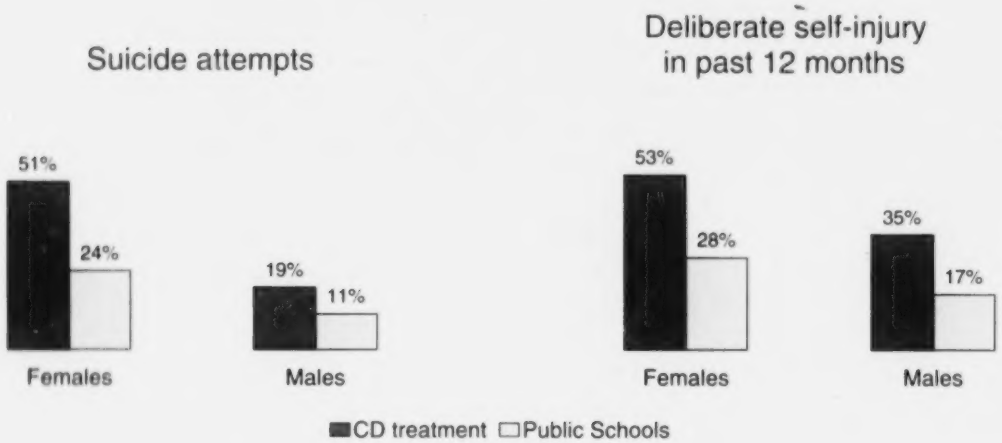
Emotional distress	CD treatment %	Public schools %
During the past 30 days...		
Have you felt sad? (All or most of the time)	24	16
How has your mood been? (Bad or very bad)	10	6
Have you felt nervous, worried, or upset? (All or most of the time)	28	20
Have you felt so discouraged or hopeless that you wondered if anything was worthwhile? (Extremely or quite a bit)	30	18
Have you felt satisfied with your personal life? (Somewhat or very dissatisfied)	29	24
Have you felt you were under any stress or pressure? (Quite a bit or almost more than I could take)	51	41

Suicidal behavior and self-injury

Consistent with their elevated rates of emotional distress, more adolescents in chemical dependency treatment reported suicidal thoughts in the previous month than adolescents in public schools (34% versus 29%). The difference in lifetime suicide attempts, however, was much greater than for recent suicidal ideation. Both females and males in the chemical dependency treatment population were about twice as likely as their public school counterparts to report that they had tried to kill themselves. In fact, half of the females and one-fifth of the males in chemical dependency treatment said they had attempted suicide.

Adolescents were also asked whether, during the previous 12 months, they had ever hurt themselves on purpose (such as by cutting or burning themselves). Adolescents in chemical dependency treatment were about twice as likely as students to report deliberate self-injury. Whereas females in treatment were almost equally likely to report suicide attempts as deliberate self-injury, males were more likely to report deliberate self-injury.

The high rates of suicide attempt and self-injury observed among the chemical dependency treatment population are consistent with the high rates of physical and sexual abuse reported by these adolescents. Not surprisingly, these adolescents also have significant self-esteem and emotional health problems, and feel that their family does not care about them. Adolescents in chemical dependency treatment who have attempted suicide are more likely to use at least 3 drugs than other adolescents in treatment.



Sexual activity

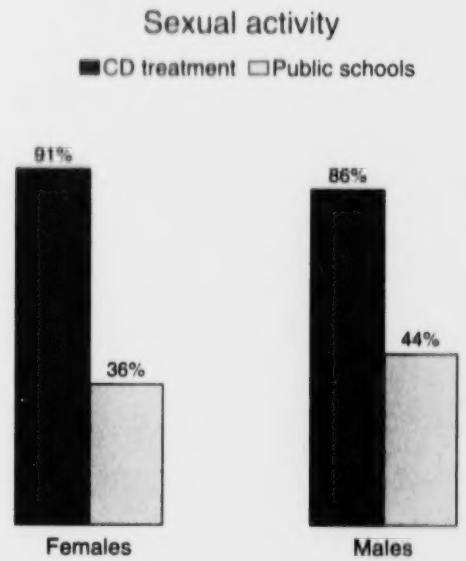
Adolescents in chemical dependency treatment were much more likely than their counterparts in public schools to have had sexual intercourse, and the difference was more pronounced for females. Nine out of ten males and females in chemical dependency treatment said they had had sexual intercourse. In contrast, fewer than half of the males and about one-third of the females in public schools reported having had sexual intercourse.

Among the sexually active adolescents, adolescents in chemical dependency treatment were more likely to have started sexual activity at a younger age; 69% of the sexually active adolescents in chemical dependency treatment said that their first experience had occurred by age 14 compared with 47% of the sexually active adolescents in public schools.

With respect to both the high rate of sexual activity and the early age of initiation into sex among adolescents in chemical dependency treatment, it is important to note that such sexual activity may not have been voluntary. It is possible that, for many adolescents, their first sexual experience was coerced since many of the females in particular said they had been the victim of sexual abuse or date rape.

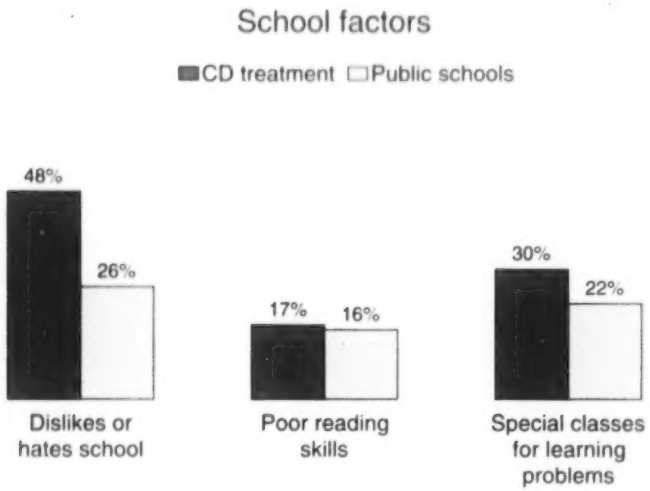
Sexually active adolescents in chemical dependency treatment also were more likely than their counterparts in public schools to report using no protection against pregnancy and/or sexually transmitted diseases the last time they had sexual intercourse (26% versus 17%). Condoms were the most commonly reported method of protection, used by 61% of the sexually active adolescents in chemical dependency treatment compared with 65% of the sexually active adolescents in public schools. Birth control pills (alone or in combination with condoms) were used by 22% of the sexually active adolescents in chemical dependency treatment compared with 28% of the sexually active adolescents in public schools.

The pregnancy rate of females and the proportion of males who got a sexual partner pregnant was higher in the chemical dependency treatment population than in the public school population. Eighteen percent of females in chemical dependency treatment have been pregnant compared with 6% of females in public schools. Similarly, 14% of males in chemical dependency treatment reported having gotten a sexual partner pregnant compared with 4% of males in public schools.



Adolescents in chemical dependency treatment were much more likely than adolescents in public schools to say that they dislike or hate school. However, most adolescents in both groups said that they planned to finish high school or go on to post-secondary education; only 7% of adolescents in chemical dependency treatment compared with 3% of adolescents in public schools said that they would like to quit school as soon as they can.

A similar percentage of adolescents in chemical dependency treatment and students in public schools said that their reading skills had prevented them from keeping up with classwork; the proportions in both groups were relatively small. More adolescents in treatment than students reported that they had been in special classes for learning problems, however.

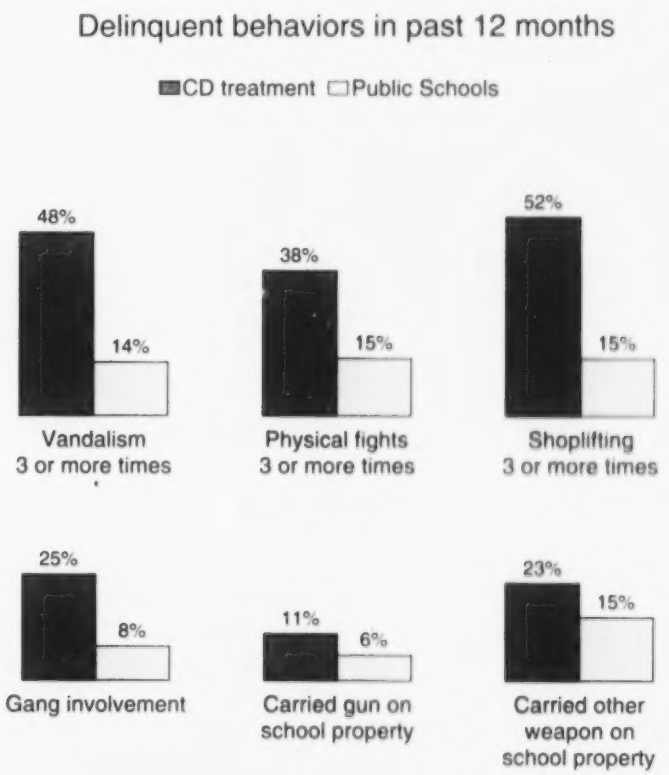


Delinquent behavior

Adolescents in chemical dependency treatment settings were much more likely than their counterparts in public schools to report antisocial behaviors during the previous 12 months. Approximately half of the adolescents in chemical dependency treatment reported acts of vandalism and shoplifting at least 3 times in the previous year; these rates were 3 times higher than those for adolescents in public schools. Physical fights were also reported more often by adolescents in chemical dependency treatment than their public school counterparts. Adolescents in chemical dependency treatment also were much more likely to say that they get a "kick" out of doing dangerous things than adolescents in public schools (58% versus 32%).

Even more dangerous behavioral indicators distinguished the two groups of adolescents. Adolescents in chemical dependency treatment were 3 times more likely than adolescents in public schools to report spending time in a gang. They also were more likely to have carried weapons on school property. Males in chemical dependency treatment were more likely than females to carry guns (15% versus 4%) and other weapons (28% versus 15%). Males were also more likely to be involved in a gang (30% versus 16%) whereas females were more likely to have friends in a gang (55% versus 38%).

The high rates of antisocial behavior reported by adolescents in chemical dependency treatment were associated with reports of family dysfunction and a perception of a noncaring family.



Recent trends in substance use

Substance use among adolescents is of heightened interest recently because of increases in the use of cigarettes, marijuana, LSD, and other drugs reported in a variety of national studies.[3,4] Overall, the trends in Minnesota have mirrored those reported nationally, as shown in the comparison of Minnesota Student Survey results from 1989, 1992, and 1995.[2]

Although the focus of this report is the comparison between Minnesota adolescents in chemical dependency treatment and Minnesota public school students, the recent national and state trends provide a helpful context for evaluating the magnitude of the differences found between these groups of young people.

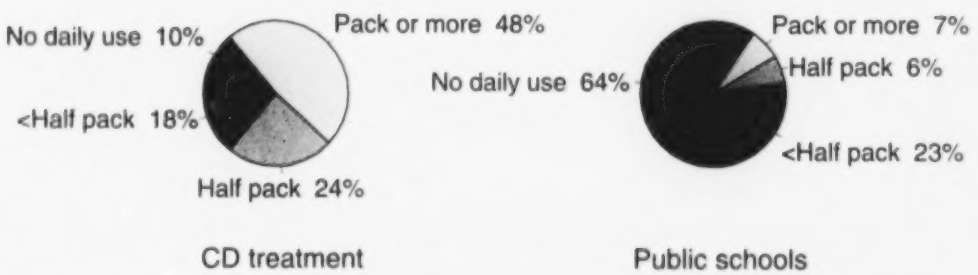
The national prevalence of cigarette smoking has steadily increased since 1992 among adolescents of all ages.[5] Minnesota smoking rates among adolescents have also increased and are actually higher than national rates.[2]

Nationally, alcohol use among adolescents declined from the 1980s through 1993 and then leveled off.[3] In Minnesota, the declines in alcohol use continued through 1995, and the Minnesota rate of alcohol use among adolescents was lower than the national rate. Trends for marijuana use were markedly different, however. Marijuana use increased dramatically between 1992 and 1995 both nationally[3] and in Minnesota,[2] but the state rates remained lower than the national rates. National surveys have also shown increases in other drugs, such as LSD and cocaine.[3] Even with the recent increases, the overall prevalence rates for drugs other than marijuana remained relatively low in 1995. All drug use rates were well below peak levels seen in the late 1970s and early 1980s. Minnesota adolescent drug use rates were lower than national rates in 1995 for inhalants, LSD and other hallucinogens, cocaine, and opiates, but higher for amphetamines.[2]

Cigarette use

Adolescents in chemical dependency treatment were much more likely to smoke cigarettes on a daily basis than adolescents in public schools (90% versus 36%). The difference between the two groups of adolescents was even more pronounced for heavy smoking (at least a pack a day), with adolescents in chemical dependency treatment almost 7 times more likely than adolescents in public schools to smoke heavily.

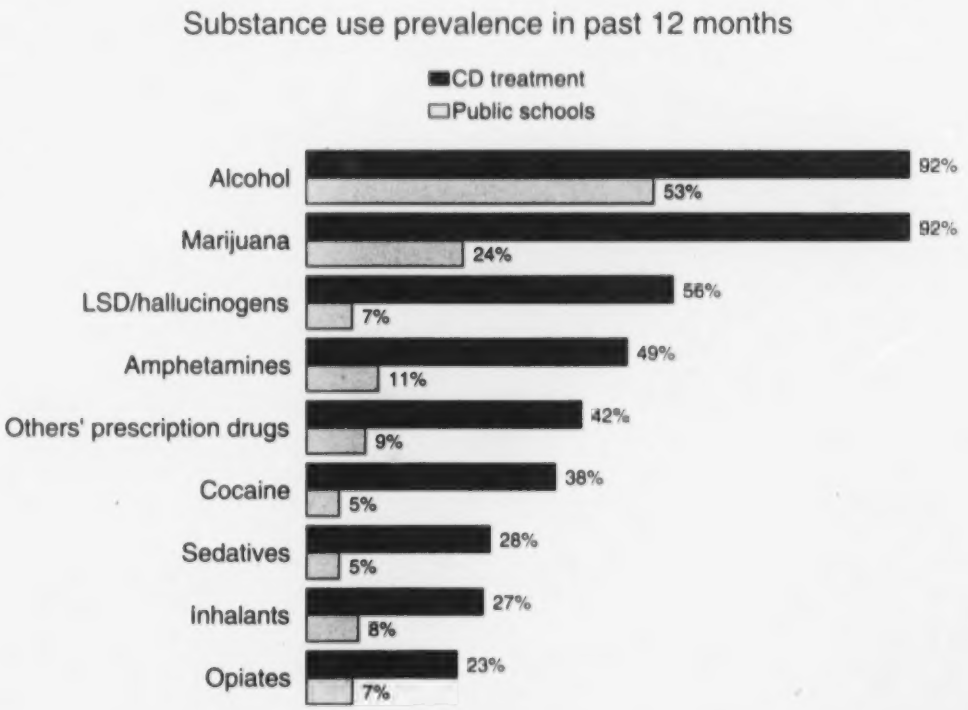
Daily cigarette use in past 30 days



Alcohol and drug use prevalence

Consistent with their involvement in chemical dependency treatment, adolescents in treatment were much more likely than adolescents in public schools to report the use of every substance inquired about in the survey. They also were more likely to initiate substance use at an earlier age. Alcohol and marijuana were the two most commonly used substances by adolescents in treatment, followed by LSD and other hallucinogens, amphetamines, and others' prescription drugs. Opiates, inhalants, sedatives, and cocaine were the least commonly used drugs by adolescents in treatment although between 23% and 38% had used them.

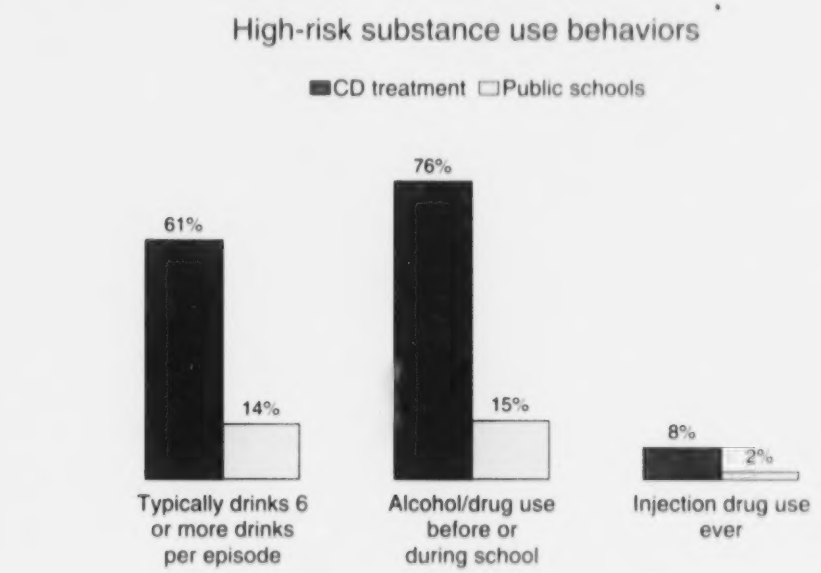
Examining reports of substance use during the previous 12 months revealed that the proportional differences between adolescent in chemical dependency treatment and public school students were smallest for alcohol. For all other substances, the differences in the proportions of users between the groups were much larger. Compared with students, adolescents in chemical dependency treatment were 3 times more likely to use inhalants and opiates, 4 times more likely to use marijuana, 4½ times more likely to use amphetamines and others' prescription drugs, 5 times more likely to use sedatives, and about 8 times more likely to use LSD or other hallucinogens and cocaine.

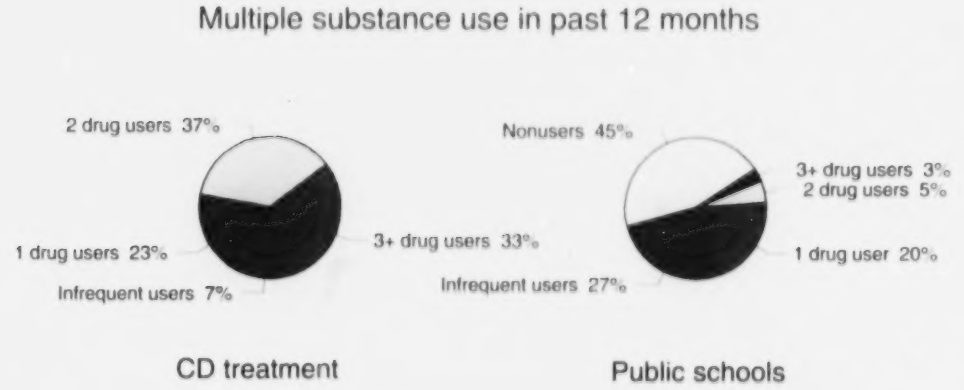


High-risk substance use

In addition to higher overall substance use, adolescents in chemical dependency treatment engaged in more dangerous drinking and drug use behaviors than their public school counterparts. They were 4 times more likely to drink at least six drinks when they drank, 5 times more likely to use alcohol or drugs before or during school, and 4 times more likely to have injected drugs, a very risky behavior, especially in light of possible HIV transmission.

To illustrate differences in the use of multiple drugs, a hierarchy of substance use was created based on use in the past 12 months. Adolescents who had not used any substances in the past 12 months were classified as nonusers. Adolescents who did not use any drug more than 9 times were classified as infrequent users. Those who used only one substance 10 or more times were classified as 1-drug users, and those who used two substances 10 or more times each were classified as 2-drug users. The most severe pattern was the use of at least three drugs 10 or more times each; adolescents with this pattern were classified as 3-or-more-drug users. Adolescents in chemical dependency treatment were 7 times more likely than adolescents in public schools to be 2-drug users and 11 times more likely to be 3-or-more-drug-users.





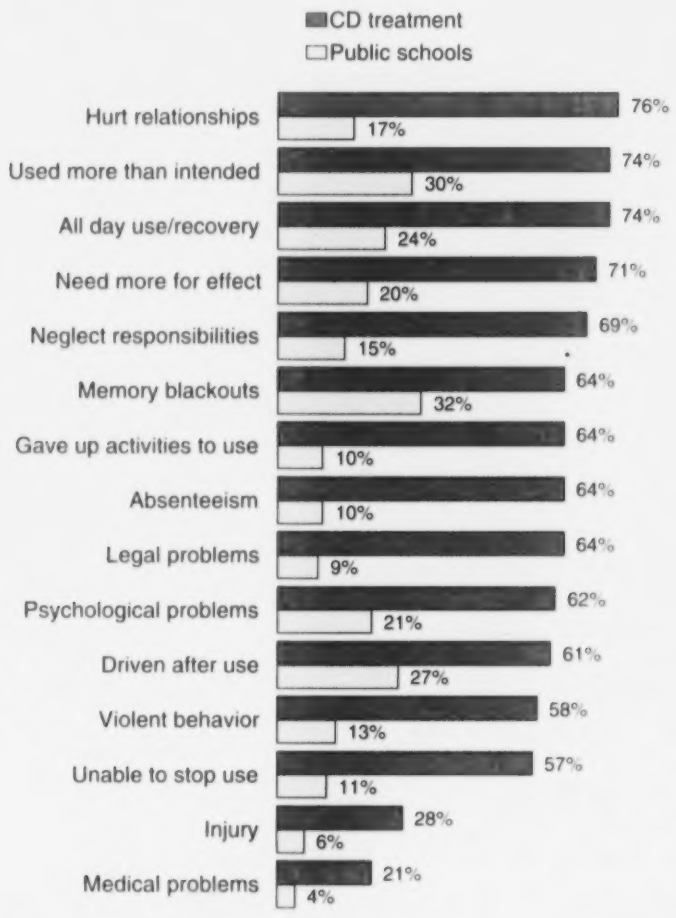
Consequences of substance use

Consistent with their higher rates of substance use and use of multiple substances, adolescents in chemical dependency treatment were much more likely than students to report adverse consequences of their use during the previous 12 months. The average number of consequences reported by adolescents in treatment was 8.9 compared with 2.4 for students who reported substance use during the previous year.

The consequences most commonly reported by the adolescents in treatment were impaired interpersonal relationships, using more than intended, spending all day using or recovering from the effects of use, and tolerance (needing more to achieve an effect). The majority of adolescents in treatment also reported all other consequences asked about except two; substance use-related injuries and medical problems were reported by a minority of adolescents in treatment.

While adolescents in chemical dependency treatment were 2 to 3 times more likely than public school students to have memory blackouts, to drive after using, and to use more than intended, they were 6 to 7 times more likely to give up activities in order to use, and to have problems with absenteeism and the law because of their use.

Substance use consequences associated with past 12 month use



To establish a context for evaluating the level of problems among adolescents in chemical dependency treatment, each survey participant was matched with a public school student of the same gender and age who participated in the statewide survey. The comparisons revealed that the chemical dependency treatment population differed from the general student population on many dimensions:

- Chemical dependency treatment programs included a disproportionate number of adolescents from single-parent homes.
- Familial rates of alcohol and drug abuse were about three times higher among adolescents in chemical dependency treatment than among students in public schools.
- Adolescents in chemical dependency treatment were almost twice as likely as students in public schools to have been physically abused, to have witnessed physical violence within their homes, or to have been victims of sexual abuse outside of their homes.
- Adolescents in chemical dependency treatment were about twice as likely as public school students to report suicide attempts and deliberate self-injury.
- Almost nine out of ten adolescents in chemical dependency treatment were sexually active, and they were less likely to use protection against pregnancy or sexually transmitted diseases than public school students.
- High rates of antisocial acts such as vandalism, fighting, and shoplifting were evident among adolescents in chemical dependency treatment. Nearly one-fourth of the adolescents in chemical dependency treatment reported some involvement in a gang.
- Three-fourths of adolescents in chemical dependency treatment used alcohol or drugs before or during school. Half smoked at least a pack of cigarettes a day.

Substance abuse problems are obviously the catalyst for chemical dependency treatment placements. However, it is not merely the differences in substance abuse between adolescents in chemical dependency treatment and public school students which are striking. Adolescents in chemical dependency treatment also report more antisocial behavior, psychological distress, and self-destructive behavior than their student counterparts. Moreover, many of these youth have encountered a great deal of trauma in their environments.

The profile of adolescents in chemical dependency treatment depicts vividly the constellation of family, environmental risk factors, problem behaviors, and psychological distress among adolescents. Family risk factors included violence, sexual abuse, parental substance abuse, and adolescents' perception that parents and other family members do not care very much about them. Environmental risk factors included sexual abuse outside the home, date rape, and date violence. Adolescent problem behavior included substance abuse and other antisocial or violent behavior, high-risk sexual behavior, deliberate self-injury, and suicide attempts. Psychological distress included low self-esteem and emotional distress such as depression and anxiety.

Family risk factors were often interrelated, with many adolescents reporting more than one of these risk factors. The same was true of environmental risk factors. Adolescent risk

behaviors were also associated with one another and with psychological distress, meaning that any particular behavioral or psychological problem was associated with an increased likelihood of other problems. The family and environmental risk factors were also significantly associated with the adolescent's behavior and psychological problems.

The meaningful relationships between risk factors and adolescent problems found in the survey of the adolescents in chemical dependency treatment population are not only consistent with earlier survey findings of adolescents in public schools,[6-8] they are also consistent with clinical research and other epidemiological studies. Family factors have been consistently implicated in adolescent delinquency, substance abuse, and mental health problems.[9-11] Poor parent-child relationships, neglect, lack of warmth and affection, and inconsistent discipline have been found to be related to low self-esteem, depression, and substance abuse among adolescents.[12-15]

Childhood sexual abuse consistently has been found to be associated with low self-esteem, anxiety and depression, self-injury, and suicide attempts.[16-19] Sexual abuse often leads to anger, hostility, distrust of others, and the inability to establish intimacy, particularly when the abuser was a parent or trusted caregiver, causing serious problems in interpersonal relationships.[17] Sexual abuse leads to overt behavioral problems as well, including truancy and other school problems, delinquency, running away, prostitution, and substance abuse.[11,18,20-23] Childhood physical abuse is similarly associated with a range of negative effects including aggressive and violent behavior, low self-esteem, difficulty in establishing relationships, self-destructive behaviors, and psychiatric illness.[11,19,24] Witnessing family violence may have similar negative outcomes.[25]

The relationships among the variety of risk factors and problem behaviors examined in the survey of adolescents in chemical dependency treatment are complex. For example, sexual and physical abuse can lead to repeated victimization when young people who run away from abuse at home become vulnerable to more abuse on the streets. Adolescents may use alcohol and other drugs in an attempt to alleviate the distress associated with abusive experiences, but substance abuse may in fact increase their exposure to the risk of rape and violence. Moreover, substance abuse often worsens feelings of depression and anxiety, and is associated with suicide attempts among adolescents.[8,22] Sometimes substance abuse is an attempt to deal with social alienation, but substance abuse may exacerbate the very problem it is intended to solve when it further disrupts family relationships and friendships. Substance abuse can increase delinquent and criminal behavior (when adolescents steal to obtain money for drugs, for example), but often other antisocial behaviors predate the initiation of substance use.[26]

The fact that so many adolescent problems are interrelated and the reality that many are associated with family problems suggests that solutions will require concerted and collaborative efforts. Many of the adolescents in chemical dependency treatment emerge from a social milieu replete with violence and despair. Individual families and society as a whole must make a renewed commitment to children. Young people need to be reared in an environment where they are protected, respected, and valued, in order that they learn to value themselves, respect their needs and the needs of others, and adopt healthy and responsible behaviors.[7]

The results of this report, along with previous research,[11,22] have shown that there is an increased risk for substance abuse among children and adolescents who have been sexu-

ally or physically abused. Early interventions for abuse victims are essential to mitigate this risk. To be successful, interventions will need to involve offending family members as well as victims. For adolescents with abuse histories, it is important to recognize and respond to the possibility that an adolescent's current substance use problem may be, at least in part, a response to violence directed at them within a dysfunctional family.[27] Therapeutic services to deal with abusive experiences need to be a component of comprehensive treatment programs.[27]

A variety of studies of adolescents document the high rate of co-existing psychiatric disorders among adolescents in treatment for chemical dependency. The most common diagnoses associated with adolescent substance abuse include conduct disorders, depressive disorders, and anxiety disorders.[28,29] Little information is yet available on the relationship between depressive and anxiety disorders and substance use following treatment; however, conduct disorder has been implicated in poorer treatment outcomes.[30] Thus, childhood antisocial behaviors are not only a well-documented risk factor for the initiation of alcohol and other drug use among adolescents, these behaviors may place adolescents at higher risk for poorer treatment outcome as well. Since adolescents with conduct disorders frequently experience greater conflict in interpersonal relationships, they may use alcohol or drugs to cope with the increased conflict and stress even after treatment.[30] Comprehensive assessments and treatment strategies must be designed to deal simultaneously with substance abuse and mental health problems.

Family relationships are also an important focus of adolescent chemical dependency treatment. Research has shown that the more involved families are in the treatment of the adolescent, the more favorable the treatment outcome.[31] Specifically, because of the complex problems many substance-abusing adolescents exhibit, family programs need to focus on parent training and appropriate behavior management skills for parents of troubled youth.[27] However, the unfortunate reality is that many chemically dependent adolescents come from chemically dependent or otherwise dysfunctional families, and the family may not offer the most conducive environment for the adolescent's recovery.[31] Particular attention to the family environment in discharge planning is essential.

The need for more innovative continued care programming is critical, particularly for adolescents coping with unhealthy home or school environments.[31] Continuing care may be the most vital modality in the recovery process — especially important because of adolescents' lack of maturity, general lack of coping skills, and emotional and developmental lags that result from prolonged substance abuse.[32] The length and intensity of continuing care should be flexible to respond to individual needs, and must take into account any factor which may threaten an adolescent's recovery.

Recovery systems must recognize the developmental stages of adolescence. Middle to late adolescence is an important period for formation of personal identity, adjustment to social roles and responsibilities, and separation from the family of origin.[30] For adolescents at this time, the peer group is the primary source of identification and a powerful influence on behavior, so student assistance programs can be helpful in providing a primary support system after treatment. In-school recovery support groups also can be beneficial.[31]

Recommendations

The results of the Minnesota Student Survey of adolescents in treatment for substance abuse have implications for how assessment and treatment is provided. Troubled adolescents have a history of physical or sexual abuse, substance abuse, emotional distress, high-risk sexual behavior, illegal activity, suicide attempts, or problems in school. By the time they are identified as needing treatment for substance abuse, many of them have experienced several of these problems.

An adolescent may come to the attention of school authorities, or health care, social services or juvenile justice systems as a result of substance use or other high-risk behavior. Regardless of the impetus for evaluation, an assessment should be comprehensive and conducted by professionals trained to discern the presence of psychiatric disorders and substance use disorders as well as physical abuse, sexual abuse, other family dysfunction, or environmental risk. This type of thorough assessment needs to be available for all families without limits imposed by financial resources.

Early intervention services need to be enhanced to respond to emerging alcohol and drug problems among adolescents who do not exhibit consequences that are serious enough to meet criteria for admission to chemical dependency treatment. Timely and appropriate interventions may preclude the need for treatment for many adolescents.

The survey results also have implications for the provision of substance abuse treatment. Specific recommendations are:

- Chemical dependency treatment should address tobacco as an addictive, mood-altering drug.
- Therapeutic services should be flexible to respond to diverse and complex individual and family needs. Toward this end, treatment programs should have staff or arrangements with community resources with expertise in mental health, services for abuse victims, and family therapy.
- Family involvement in adolescent treatment should be expected. Treatment programs should be prepared to assist parents in learning parenting and behavior management skills. When substance abuse, violence, or other problems among family members may interfere with an adolescent's recovery, family members should be given assistance in finding individual help as well.
- In discharge planning the treatment program should consider the level of family functioning and the adolescent's ability to cope with the environment. The adolescent's safety and well-being must be a primary consideration.
- The responsibility of the treatment program should not be considered met until the adolescent has developed sufficient appropriate coping mechanisms to address each of the problem areas identified in the assessment or the adolescent is connected with a more appropriate resource.

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